

In the Claims:

Claims 1 to 42 – canceled

43. (original) A polymeric material with a molecular imprint made by a process comprising the steps of:

expanding a mixture containing a propellant and monomers to form particles;
introducing a template into said particles which does not covalently bind to said monomers;

polymerizing said particles in the presence of said template to form composite particles having polymer and template, wherein said template is not bound to said polymer; and

extracting said template from said composite particles without distorting a morphology of said composite particles to provide polymerized particles imprinted by said template with a size and arrangement of chemical functional groups complementary to said template.

44. (original) The polymeric material of claim 43 wherein said composite particles are 50 microns or less in size.

45. (original) The polymeric material of claim 43 wherein said composite particles are 1 micron or less in size.

46. (original) A device for selectively joining with an analyte in a sample, comprising:

a substrate; and

a plurality of polymeric particles imprinted by a template specific for said analyte adhered directly to a surface of said substrate by a chemical or mechanical bond with said polymeric particles.

47. (original) The device of claim 46 wherein said substrate is part of a sensor.

48. (original) The device of claim 46 wherein said substrate is part of a chromatography device.

49. (original) The device of claim 46 wherein said substrate is a conductive material.

50. (original) The device of claim 46 wherein said substrate is an insulative material.

51. (original) A filter, purifier, or separation device, comprising

a porous substrate; and

a plurality of polymeric particles imprinted by a template specific for an analyte adhered to surfaces of said substrate by a chemical or mechanical bond with said polymeric particles.

52. (original) The filter of claim 51 wherein at least some of said surfaces to which said polymeric particles are adhered to are internal to said porous substrate.

53. (original) A chemical delivery material, comprising:

a polymeric particle imprinted by a template specific for an analyte; and

an agent associated with said polymeric particle which is selectively releasable from said polymeric particle.

54. (original) The chemical delivery material as recited in claim 1 wherein said agent is a drug.

55. (original) The chemical delivery material as recited in claim 53 wherein said agent is releasable by hydrolyzing bonds between said polymeric particle and said agent.

56. (original) The chemical delivery material as recited in claim 53 wherein said polymeric particle is biodegradable.

57. (original) The chemical delivery material as recited in claim 53 wherein said agent is an enzyme.

58. (original) The chemical delivery material as recited in claim 53 wherein said agent includes a nucleic acid sequence.

59. (original) The chemical delivery material as recited in claim 53 wherein said agent is a protein.

60. (original) The chemical delivery material as recited in claim 53 wherein said agent is a vitamin.

Claim 61 - canceled

62. (original) A non-agglomerated, solvent free collection of a plurality of selectively polymerizable particles, each of which are comprised of a monomer of solid state reactivity, and each of which is 1 micron or smaller in size.

63. (original) The non-agglomerated, solvent free collection recited in claim 62 wherein at least to of said plurality of particles are comprised different monomer materials.

64. (original) The non-agglomerated, solvent free collection recited in claim 62 wherein at least one of the monomeric particles in said plurality is molecularly imprinted.

65. (original) A collection of selectively polymerizable particles, consisting of:
a plurality of monomeric particles each of which is composed of a monomer of solid state reactivity, and each of which is one micron or smaller in size.

66. (original) A coated substrate, comprised of:
a substrate;
a plurality of monomer containing particles of solid state reactivity positioned on said substrate, each of said monomer containing particles being 100 microns or smaller in size.

67. (original) The coated substrate of claim 66 wherein said plurality of monomeric particles cover only a patterned portion of a surface of said substrate.

68. (original) The coated substrate of claim 66 wherein at least two of said monomer containing particles are composed of different materials.

69. (original) The coated substrate of claim 66 wherein at least one of said monomer containing particles contains a template for molecularly imprinting positioned therein.

70. (original) The coated substrate of claim 66 wherein said coated particles are one micron or less in size.

Claims 71 to 80 – canceled